

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001620**Date Inspected:** 03-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Hu Weiqing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Yuan Wensong ID#055491 groove welding at FB018-01 joining stiffener plate to floor beam plate. Mr. Yuan was observed welding in the 2G (horizontal) position utilizing flux cored arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 semi automatic. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Hu Weiqing verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 60°C and measured the welding parameters to be 290 amps, 28.5 volts, a travel speed of 310 mm/min and a shielding gas flow of 21L/min. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2232-Tc-U4b-F, Revision 0.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Zhang Qingquan ID#044774 groove welding at FB025-02 weld joint #062 joining stiffener plate to floor beam plate. Mr. Zhang was observed welding in the 2G (horizontal) position utilizing flux cored arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 semi automatic. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Hu Weiqing verifying that the welding parameters and pre-heat were in accordance with the

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Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 60°C and measured the welding parameters to be 280 amps, 29.9 volts, a travel speed of 310 mm/min and a shielding gas flow of 21L/min. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2232-Tc-U4b-F.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector randomly observed ZPMC personnel removing areas of porosity from fillet welds found by the CWI Inspector Mr. Hu Weiqing in floor beam FB026-01. ABF David Larue informed CWI Inspector Hu Weiqing to make sure that all of the porosity had been removed before rewelding.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC welders tack welding stiffeners to floor beam by method of flux cored arc welding (FCAW) and shielded metal arc welding (SMAW) process for FB021-01, FB026-02, FB017-01, FB017-02 and FB022-02.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC Magnetic particle (MT) technician Mr. Wang Shaoxiong performing MT on floor beams fillet and complete joint penetration welds. Floor beams tested are FB002-02, FB008-01 and FB016-01. Mr. Shaoxiong had not marked floor beams for acceptance or rejection at the end of this shift.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC ultrasonic testing (UT) technician Mr. Li Liming performing (UT) testing on diaphragm flange complete joint penetration welds. Flanges inspected by are FB003-003-103, FB003-004-103 and FB003-005-103. Welds were accepted by Mr. Liming.

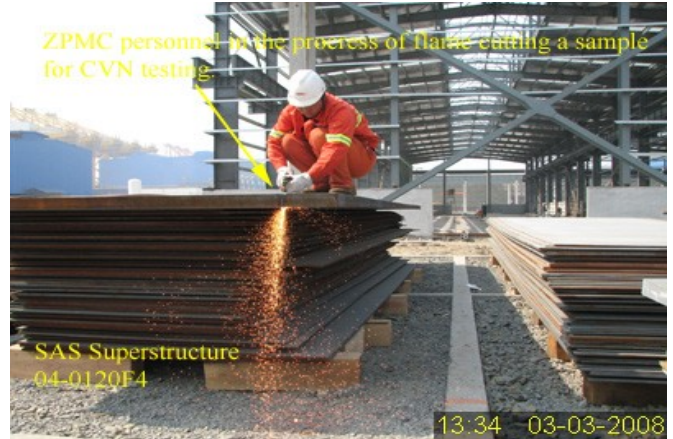
Plate Material Storage Yard (production):

QA Inspector Brannon observed ZPMC flame cutting 4 sample for retesting for Charpy-v-Notch (CVN). QA Inspector Brannon verified plate material for grade, batch number, heat number and size for sample #787-12-1, 787-12-3, 787-12-4 and 787-12-5. QA Inspector Brannon went to the ZPMC material storage yard accompanied by ZPMC QC Miss. Zhu Weijuan.

The following digital photograph below illustrates observation of the activities being performed.

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Summary of Conversations:

No relevant conversations on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon,Sherri	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
